

DETAILED ACTION

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 2, 6, and 7 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claims 2, 6, and 7, the phrases “preferably” and “such as” render the claims indefinite because it is unclear whether the limitations following the phrase are part of the claimed invention. See MPEP § 2173.05(d). It is assumed that such limitations are not required by the claim for examination on the merits.

Claim Objections

Claim 12 is objected to because of the following informalities:

Recitation of “the metal frame” lacks antecedent basis.

Appropriate correction is required.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

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(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-4 and 6 are rejected under 35 U.S.C. 102(b) as being anticipated by

Kruskopf et al. (U.S. Patent No. 5,194,027 “Kruskopf”).

Regarding claim 1, Kruskopf discloses a display screen structure comprising:

a display screen assembly, which in turn includes a display screen (Figure 4A elements 18 and 20) and a protective panel (24) having an inner face positioned at a predetermined distance in front of an outer face of the display screen and allowing the viewing of material on the display screen therethrough, characterized in that a layer of filler transparent material (22) is provided between said inner face of the protective panel and the outer face of the display screen.

Regarding claim 2, Kruskopf discloses the filler material as an encapsulating material (Column 2 lines 1-4).

Regarding claim 3, Kruskopf discloses the filler material as provided in an enclosed volume defined by the outer face, inner face, and at least one bead of material which forms at least one gasket defining a side wall (Figure 4A element 26).

Regarding claim 4, Kruskopf discloses the at least one gasket as formed of a material provided in a substantially linear path around the periphery of the protective panel and the display screen (Figures 2 and 4A element 26; Column 3 lines 60-64).

Regarding claim 6, Kurskopf discloses the gasket as formed of a polymer material (Column 3 lines 62-64).

Claims 8 and 9 are rejected under 35 U.S.C. 102(b) as being anticipated by Inohara et al. (U.S. Patent No. 4,357,557 “Inohara”).

Regarding claim 8, Inohara discloses a method of forming a display screen structure including a display screen (Figure 1 elements 1-5) and a protective panel (element 11) having an inner face mounted in front of an outer face of the display screen, characterized in that the method comprises the steps of:

applying at least one bead of material (12) to the inner face of the protective panel and/or the outer face of the display screen to form at least one gasket, the at least one gasket being positioned around the display screen;

bringing the protective panel and the display screen together to contact opposing faces of the at least one gasket at the predetermined distance (Column 3 lines 22-25), and

introducing a layer of filler material to substantially fill the volume defined between the inner face of the protective panel, the outer face of the display screen, and the at least one gasket (Column 3 lines 42-45).

Regarding claim 9, Inohara discloses two linear beads of material as provided to form two gaskets (10 and 12).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 5 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kruskopf in view of Fukiharu (U.S. Patent No. 6,603,519).

Regarding claims 5 and 7, Kruskopf fails to disclose the gasket as provided between the display screen and a metal frame surrounding the display screen. Fukiharu, however, teaches a metal frame surrounding the display screen and the gasket as provided between the display screen and the metal frame (Figure 4 element 104).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to form the gasket between the display screen and a metal frame in the display device disclosed by Kruskopf. One would have been motivated to form the metal frame as proposed as a means of concealing the gasket according to the teachings of Fukiharu (Column 3 lines 7-9).

Claims 10, 11, 13, and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Inohara in view of Kruskopf.

Regarding claims 10, 11, 13, and 14, Inohara fails to disclose the filler material and the material used to form the gasket as introduced in a fluid state to fill the volume and subsequently cured. Kruskopf, however, teaches the filler and gasket as introduced as a fluid and cured (Column 4 lines 30-41).

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It would have been obvious to one of ordinary skill in the art at the time the invention was made to introduce the filler and gasket as fluid and subsequently cure. One would have been motivated to form the filler and gasket as proposed by Kruskopf to allow the display to be used in a variety of environments and to prevent propagation of defects in the display (Column 4 lines 38-59). Further, the metering system and predetermined depth is accomplished by virtue of filling the predetermined volume.

Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Inohara in view of Kruskopf and in further view of Fukiharu.

Inohara fails to disclose the gasket as provided between the display screen and a metal frame surrounding the display screen. Fukiharu, however, teaches a metal frame surrounding the display screen and the gasket as provided between the display screen and the metal frame (Figure 4 element 104).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to form the gasket between the display screen and a metal frame in the display device disclosed by Inohara. One would have been motivated to form the metal frame as proposed as a means of concealing the gasket according to the teachings of Fukiharu (Column 3 lines 7-9).

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to MICHAEL H. CALEY whose telephone number is (571) 272-2286. The examiner can normally be reached on M-F 8:30 a.m. - 5:00 p.m..

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David C. Nelms can be reached on (571) 272-1787. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Michael H. Caley/
Primary Examiner, Art Unit 2871